

## ABSTRACT OF THE DISCLOSURE

A low read current, low power consumption sense amplifier well suited for low frequency RFID systems is disclosed. An MOS transistor receives the read current from a memory cell, typically an EEPROM, and a current mirror is formed by a parallel MOS  
5 transistor. The mirror current is integrated on a capacitor after the charge on the capacitor is cleared via a reset pulse. A time period is defined during which the voltage on the capacitor is compared to a second voltage. The second voltage is formed from a reference voltage or from dummy cells, in either case the reference voltage is at about the logic boundary between a one and zero stored in a memory cell. A comparator, with or  
10 without input hysteresis, receives the voltage on the capacitor and a second voltage and within the time period, the output state of the comparator indicates the binary contents of the memory cell.